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This study provides guidelines that could be used by each of the military Services in providing Logistic Resource annexes (LRA) to their Five Year Defense Programs (FYDP). The LRAs would be updated concurrent with each updating of the FYDPs and would show logistic resources by logistic function and, for some type of resources, by selected

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20. weapon system. The paper provides comprehensive coverage of the Air Force, Navy and Marine Corps. Coverage is less comprehensive on the Army because of work on this topic by the General Research Corporation.

Volume I establishes the framework for the research. It includes considerable material relating to the characteristics of logistic data and the ways in which financial manpower logistic data should be treated in the Service LRAs. This volume also contains the results of research on an LRA for the Army, and presents recommendations on an OSD-level LRA data system.

Volumes II, III, and IV cover the Navy, Air Force, and Marine Corps respectively. Each of these volumes discusses in depth the Service data systems that are applicable to the LRA and describes the Service LRA data base coverage. A data element reference guide is presented for each Service to show explicitly how the Service could support each line in the LRA and the relevant data systems. Each of the volumes contains an appendix in which there is extensive discussion of how the particular Service could treat each category of logistic resources in satisfying the LRA requirement.

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GUIDELINES FOR THE DEVELOPMENT AND IMPLEMENTATION OF A LOGISTIC RESOURCE ANNEX TO THE FIVE YEAR DEFENSE PROGRAM

EXECUTIVE SUMMARY

John D. Morgan, *Project Leader*
Norman B. Davis
Aaron B. Fuller

October 1978

Prepared for

Office of the Assistant Secretary of Defense (MRA&L)

INSTITUTE FOR DEFENSE ANALYSES
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EXECUTIVE SUMMARY

The Logistic Resource Annex (LRA) is a proposed annex to the Department of Defense Five Year Defense Program (FYDP) designed to provide improved visibility to the dollars and manpower programmed to provide logistic support in the Services. Resources for each of the years in the applicable FYDP would be categorized and displayed in logistic functional categories prescribed by OSD. Some of the resources would also be identified by specific weapon systems selected by OSD to provide a measure of the resources consumed in supporting these systems.

A. THE TASK

This study, undertaken for the Office of the Assistant Secretary of Defense for Manpower, Reserve Affairs and Logistics, provides guidelines on how the Services could regularly produce Logistic Resource Annexes. Specifically, the study provides the following:

(1) Assessments of the capabilities of existing or potential Service programming, budgeting, and accounting systems to satisfy LRA data requirements.

(2) Preliminary recommendations for modifications to Service data systems or methods of estimating required data elements if data are not readily available in existing systems.

(3) Data element reference guides for each Service that identify the location, data reporting channels, and requirements for methods of calculation or estimation of data elements and categories.

(4) Preliminary recommendations regarding systems, procedures, and resources that would be required to establish and operate an OSD-level LRA data system.

The study comprises four volumes in addition to this Executive Summary. Volumes II, III, and IV cover the Navy, Air Force, and Marine Corps, respectively. Volume I covers the Army and provides other study materials that relate to all of the Services.

B. BACKGROUND

It is estimated that logistic support consumes about 35 percent of the resources provided annually to the Department of Defense.[1] Logistic support has long been recognized as critical to mission readiness; nevertheless, current management information system structures, including the Five Year Defense Program (FYDP) and related subsystems, do not provide desired displays of logistic support resources by function, weapon system, or other categories important for planning, programming, and analysis.

In 1975 OASD(PA&E) initiated contract research to improve the visibility of DoD logistic resources in order to facilitate the decisionmaking process with regard to these resources. IDA performed a detailed study of the Navy and other research firms performed similar studies of the other Services.[2] All of these studies were designed to explore the feasibility of establishing Logistic Resource Annexes to the OSD and Service FYDPs in order

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[1]Based on how logistic support is defined in the LRA by the Office of the Assistant Secretary of Defense for Manpower, Reserve Affairs and Logistics (OASD/MRA&L) and using data in the Service POM submittals of May 1978.

[2]The Logistics Management Institute (LMI) performed a study of the Air Force and the General Research Corporation (GRC) initiated a series of studies of the Army. GRC has continued LRA-related research in the Army and as of the time of this study GRC was under contract to the Army to help install an LRA data production system.

that logistic support resources could be identified and displayed in categories meaningful to the analyst and decisionmaker.

Using these studies and internal evaluations of OSD logistic resource data needs as a basis, OASD(MRA&L) developed a proposed LRA structure to identify the categories for which resource data are required. Part of our task was to validate the suitability of this structure. Our effort was intended to enable OASD(MRA&L) to implement a program resulting in regular production of LRAs by the Services with each updating of the FYDP.

In the initial phase of such a program, the Services were to develop the capability to display logistic support resources by defined logistic functional categories and identify those subsets of some resources that support selected weapon systems. It was assumed that the functional categories would be the ones in the initially proposed OASD(MRA&L) structure as modified by IDA and the weapon systems would be named by OSD.

OASD(MRA&L) was particularly interested in the production of LRAs to accompany the Service POM submissions in May of each year. However, it was recognized that it is also important to have LRAs accompanying the annual Service budget submissions and the updated FYDP that is prepared when the President's budget is submitted to the Congress each year. Thus, the LRA could be used extensively in making decisions on programs after the POM submittals and could also be used in budget analysis. Finally, the January LRA would contain the final baseline figures consistent with the budget under review in the Congress.

C. THE LOGISTIC RESOURCE ANNEX STRUCTURE

Exhibit 1 shows the final Logistic Resource Annex structure used in this study. It is basically the OASD(MRA&L) structure with some minor IDA-proposed modifications.

The resources to be included in the data base to support this structure are dollars and manpower. Dollars are to be shown by appropriation and by fiscal year for the time period covered in the FYDP to which the particular LRA applies. Dollars used for depot maintenance must be identified as for work performed in a Service's organic facilities, on contract, or by interservice support.

Manpower is to be shown only in terms of fiscal year end-strengths and divided into military (officers and enlisted personnel shown separately) and civilian. With the exception of depot maintenance manpower, manpower is to be shown by logistic category as appropriate. For depot maintenance, all manpower and funds programmed in the MILPERS appropriation to support authorized military end-strengths will be displayed in section IA2 of the structure by facility; no attempt will be made to distribute these resources by materiel category or type of work performed.

The LRA will also include information on dollar resources used for maintenance, modification, and technical support of equipment that can be identified to specific weapon systems selected by OASD(MRA&L). The manpower end-strengths supporting the specified weapon systems will not be shown, but manpower costs will be included in the totals shown for the appropriate logistic support categories by weapon systems.

D. CHARACTERISTICS OF THE LRA DATA

All dollar data will be shown on a direct obligation basis. The dollars shown for depot maintenance are those programmed by each Service to purchase work at industrially funded organic and interservice facilities and contractor facilities, and to support work at nonindustrially funded organic activities. Although detailed cost and revenue information on industrially funded activities is available from the existing FYDP and from

Exhibit 1. LOGISTIC RESOURCE ANNEX: OSD FUNCTIONAL CATEGORY STRUCTURE

I. LOGISTIC SUPPORT OF PEACETIME MATERIEL READINESS

A. MAINTENANCE, MODIFICATION AND TECHNICAL SUPPORT OF EQUIPMENT

1. Depot-Level Maintenance and Madification/Alteratian Installatian
   - a. Aircraft
     - (1) Airframe Reworks
     - (2) Engine Overhaul
     - (3) Component Repoir
     - (4) Madificatian Installatian
     - (5) Other Maintenance and Suppart
   - b. Ships
     - (1) Scheduled Overhaul
     - (2) Other Overhaul and Repair (RA/TA)
     - (3) Shipboard Equipment/Campanent Repair
     - (4) Alteratians Installatian (FMP)
     - (5) Canversians Installatian
     - (6) Other Maintenance and Support
   - c. Missiles
     - (1) Equipment Overhaul and Repair
     - (2) Component Repoir
     - (3) Modificatian Installatian
     - (4) Other Maintenance and Support
   - d. Combat Vehicles
     - (1) Equipment Overhaul and Repoir
     - (2) Component Repoir
     - (3) Madification Installatian
     - (4) Other Maintenance and Support
   - e. Weapons and Ordnance
   - f. Electronics and Telecommunicatians Equipment
   - g. Other Equipment

2. Manpower in Organic Depat Level Maintenance Activities

   (Entries in this sectian will shaw the manpawer in each Service's depat maintenance facilities, by facility)

3. Sustaining Engineering and Technical Suppart
   - a. Aircraft
   - b. Ships
   - c. Missiles
   - d. Cambat Vehicles
   - e. Weapans and Ordnance
   - f. Electronic and Telecommunications Equipment
   - g. Other Equipment

I. LOGISTIC SUPPORT OF PEACETIME MATERIEL READINESS, Cant.

4. Intermediate-Level Maintenance
   - a. Aircraft
   - b. Ships
   - c. Missiles
   - d. Cambat Vehicles
   - e. Weapans and Ordnance
   - f. Electronic and Telecommunicatians Equipment
   - g. Other Equipment

5. Organizatianal/Unit-Level Maintenance
   - a. Aircraft
   - b. Ships
   - c. Missiles
   - d. Cambat Vehicles
   - e. Weapans and Ordnance
   - f. Electronic and Telecammunicatians Equipment
   - g. Other Equipment

6. Initial Spares and Repoir Parts (Pracurement)
   - a. Aircraft
   - b. Ships and Shipboard Equipment
   - c. Missiles
   - d. Cambat Vehicles
   - e. Weapans and Ordnance
   - f. Electronic and Telecammunicatians Equipment
   - g. Other Equipment

7. Replenishment Spores and Repair Parts (Pracurement)
   - a. Aircraft
   - b. Ships and Shipboard Equipment
   - c. Missiles
   - d. Cambat Vehicles
   - e. Weapans and Ordnance
   - f. Electronic and Telecammunicatians Equipment
   - g. Other Equipment

8. Madification/Canversian Hardware and Alteratian Materiel (Pracurement)[a]
   - a. Aircraft
     - (1) Conversian in Lieu af Pracurement (CILOP)
       - (a) Service Life Extensian (SLEP)
       - (b) Other (CILOP)
     - (2) Operatianal/Military Capobility Impravements
     - (3) Safety
     - (4) Reliabtlity and Maintainability
     - (5) Other
   - b. Ships
     - (1) Canversians (SCN-funded)
       - (a) Service Life Extensian
       - (b) Other
     - (2) Alteratians
       - (a) Operatianal/Military Capability Impravements
       - (b) Safety
       - (c) Reliability and Maintainability

I. LOGISTIC SUPPORT OF PEACETIME MATERIEL READINESS, Cant.

   - c. Missiles
     - (1) Operatianal/Military Capability Impravements
     - (2) Safety
     - (3) Reliability and Maintainability
     - (4) Other
   - d. Cambat Vehicles
   - e. Weapans and Ordnance
   - f. Electronics and Telecammunicatians
   - g. Other Equipment

B. SUPPLY SYSTEM OPERATIONS
1. Depat-Level Starage and Distributian Activities
2. Central Inventary Management Activities
3. Pracurement Operatians and Contract Administratian Services
   - a. Central Pracurement Operatians
   - b. Central Cantract Administratian
   - c. Other Pracurement Operatians (Nan-BOS)
4. Supply Operatians
   - a. Intermediate Level
   - b. Organizatianal Level

C. TRANSPORTATION
1. Second Destinatian Transpartatian
   - a. Transpartatian
     - (1) MAC
     - (2) MSC
     - (3) Other
   - b. Terminal Services
2. Airlift Operatians (MAC)
3. Sealift Operatians (MSC)
4. Traffic Management and Terminals (MTMC)
5. Transpartatian Services
   - a. Intermediate Level
   - b. Organizatianal Level

D. LOGISTIC SUPPORT OF FORCE OPERATIONS AND TRAINING
1. Fuel
   - a. Aircraft
   - b. Ships
   - c. Vehicles
   - d. Other
2. Personnel Suppart Materiel
   - a. Subsistence
   - b. Clathing and Medical Supplies
3. Other Consumable Supplies and Materials
4. Munitians: Peacetime Operatians and Training (Pracurement)
   - a. Ammunitian
   - b. Tactical Missiles
   - c. ASW and Other Munitians

II. LOGISTIC SUPPORT OF POST-D-DAY COMBAT SUSTAINABILITY

A. WAR RESERVE STOCKAGE
1. Munitians (Pracurement)
   - a. Ammunitian
     - (1) Ground
     - (2) Air
     - (3) Ship Gun
   - b. Tactical Missiles
     - (1) Surface-Surface
     - (2) Surface-Air
     - (3) Air-Air
     - (4) Air-Surface
   - c. Other Munitians
     - (1) Sanabouys
     - (2) Tarpedaes and Mines
     - (3) All Other Munitions
2. Aviatian War Consumables (Procurement)
3. Spores and Repair Parts (Pracurement)
4. Stack Fund Materiel
   - a. Repair Parts
   - b. Clathing
   - c. Other Supplies

B. INDUSTRIAL PREPAREDNESS
1. Ammunitian Praductian Base Investment (Pracurement)
2. Other Industrial Facilities Investment (Procurement)
3. Manufacturing Technalagy (Pracurement)
4. Industrial Preparedness Operatians
   - a. Layaway/Maintenance af Reserve Plants
   - b. Layaway/Maintenance af Reserve IPE
   - c. Industrial Preparedness Planning
   - d. IPE Management and Cantrol
   - e. Manufacturing Technalagy (O&M-funded)

III. LOGISTICS MANAGEMENT AND SUPPORT ACTIVITIES

A. LOGISTICS MANAGEMENT HEADQUARTERS

B. LOGISTIC SUPPORT EQUIPMENT (Pracurement)
1. Aircraft Logistic Support
2. Ship Lagistic Support
3. Missiles Logistic Support
4. Cambat Vehicles Lagistic Suppart
5. Weapans and Ordnance Lagistic Suppart
6. Electranics and Telecommunicatians Lagistic Suppart
7. Civil Engineering Lagistic Support
8. Maintenance Suppart Equipment
9. Supply Support Equipment
10. Logistic ADP
11. Praductivity Enhancement Investment

C. OTHER CENTRAL LOGISTIC SUPPORT
1. Praperty Dispasal
2. Inactive Equipment Storage and Maintenance
3. Other Lagistics Activities

IV. INSTALLATIONS AND FACILITIES SUPPORT

A. FACILITIES CONSTRUCTION (LESS HOUSING)
1. Lagistic Facilities Construction
   - a. Supply and Storage Facilities
     - (1) Ammunitian
     - (2) POL
     - (3) POMCUS
     - (4) Other
   - b. Maintenance Facilities
2. Other Facilities Construction
   - a. Administrative Facilities
   - b. Cammunity Facilities
   - c. Medical Facilities
   - d. R&D Facilities
   - e. Operations and Training Facilities
   - f. Telecommunicatians Facilities
   - g. NATO Infrastructure
   - h. Guard and Reserve Facilities
   - i. Utilities and Real Estate Acquisition
   - j. Air Pallutian Control
   - k. Water Pallutian Cantral
   - l. Nuclear Security
   - m. Energy Canservatian Investment
   - n. Minor Construction
   - a. Planning and Design
   - p. Contingency
3. Personal Praperty Callateral Equipment
   - a. Logistics Facilities Equipment
   - b. Other Facilities Equipment

B. HOUSING
1. Family Hausing
   - a. New Constructian
   - b. Impravements
   - c. Leasing
   - d. Operatian
   - e. Maintenance
   - f. Debt Payment
2. Troap Hausing Constructian

C. REAL PROPERTY MAINTENANCE ACTIVITIES
1. Maintenance and Repair
2. Minor Canstructian
3. Utilities Operation
4. Other Engineering Suppart

D. BASE OPERATIONS: OTHER SERVICES AND SUPPORT
1. Administrative Services
2. Installatian Level Supply Services
3. Installatian Level Maintenance Services
4. Installatian Level Transportatian Services
5. Installatian Level Procurement Services
6. All Other Base Services

[a]Nan-add entries will be pravided far all programs ta shaw installatian costs separately.

budget forms that support the annual budget submissions, none of this information is shown in the LRA.

Some logistic support resources are appropriated to one Service but actually "consumed" by another Service. This is true particularly in the Navy and Marine Corps; for example, military personnel financed by Marine Corps appropriations are assigned to Navy organizations and shown in Navy program elements in the FYDP.

To handle this problem of fund appropriation versus usage, we adopted a "Service Appropriation Integrity" approach. Using this concept means that all of the Total Obligational Authority (TOA) of a single Service is included in that Service's LRA, and no portion of the TOA of any other Service is shown there. Thus, while some of the resources shown in a Service's LRA will be included in another Service's program elements in its FYDP, we concluded that it was important to show all of the funds appropriated to a Service for logistic support functions in that Service's LRA. Should OASD(MRA&L) wish to see what logistic resources each Service consumes regardless of which Service receives the appropriation, such a display could be developed using the information in the LRA data base and backup data systems.

We have recommended that Service manpower be identified in terms of logistic function performed regardless of the individual's actual job code. Of course, it can be assumed that most of the personnel performing logistic functions will have logistic job codes but this will not be true in all cases.

We have further recommended that all manpower in primary logistics mission organizations be identified according to the functional area represented by the primary mission of the organization. For example, all manpower in an intermediate maintenance squadron would be identified as maintenance manpower, even though some of them may be performing clerical or supply

functions within the organization. On the other hand, we have proposed that logistic personnel in organizations with primary missions other than logistics should be identified according to their logistic functional category. For example, supply clerks in an F-15 squadron would be identified to the organizational supply functional category (section IB4b of the LRA structure). This ensures that all manpower involved in logistic support work will be shown in the LRA.

The identification of logistic resources financed by procurement appropriations is a fairly straightforward process, because these resources are quite visible. Two areas that will require special consideration, however, are logistic support equipment and initial and replenishment spares and repair parts. The major problem involved in categorizing logistic support equipment is how to define this equipment properly in each Service and then show it in appropriate and meaningful categories. We have proposed 11 categories and provided guidelines on how to identify the equipment to be displayed in each category. Nevertheless, it will be necessary for each Service to conduct careful analyses to be sure that the proper equipment is selected for display in the LRA. Once the equipment is identified it should be readily relatable to an equipment category. It is not necessary to identify this equipment according to weapon systems.

Spares and repair parts must be identified both to materiel category and to designated weapon systems. Both initial and replenishment spares can be identified to materiel category in a reasonably direct manner. It is not difficult to identify initial spares to a weapon system, but this is not true for replenishment spares. These latter spares may have to be statistically allocated, but we believe that appropriate methods can be developed to perform these allocations.

E. APPROACHES RECOMMENDED TO PRODUCE LRA DATA

The LRA structure is intended to be used by all of the Services, recognizing, of course, that all four Services will not utilize all of the resource categories listed in the LRA. We found that a great deal of standardization of Service procedures and reporting requirements exists because of the uniform requirements of the DoD PPBS and budget processes. Because of this, although the details of the Service data systems may differ, relatively uniform methods can be used in all four Services to obtain the necessary LRA information. Exhibit 2 shows the basic methods that we recommend.

Information on procurement, construction, and housing is available in basically the same categories and at the same level of detail in all Services. The Services do not all treat operating resources identically, but all Services must have data bases and systems that can produce operating resource information to support PPBS and budget submission requirements. We found that although some expansions and modifications of these financial and manpower systems are required, the basic Service operating resource systems could be used to support the LRA.

It is recommended that readers interested in the methods used for the individual Services read the appropriate volume of this study. Each volume contains a summary of the coverage provided in the main body of the volume.

F. CONTENTS OF THE VOLUMES

1. Volume 1: The DoD Logistic Resource Annex System

In the introductory chapter of Volume I we discuss our assumptions and guidelines for the entire four-volume study. Our research approach and research scope are described, and we conclude here that using the guidelines presented in this study, the Services could produce the first LRAs with the Service POMs in May 1979.

Exhibit 2. BASIC METHODS OF OBTAINING LRA DATA

Procurement Resource Data

To obtain these data:

-- Use Procurement Annex information supplemented by data from resource sponsors who maintain budget backup and program management detail information.

-- Allocate categories of resources by budget activities and, in some cases, subactivities to materiel categories and weapon systems.

Central- and Field-Managed Operating Resource Data

To obtain these data:

-- Use some data directly available by FYDP Program Element.

-- Use DoD budget forms for some data elements and for allocation factors.

-- Acquire through resource sponsor analyses.

-- Use financial data in Service PPB-related data systems, for example, the Navy NCIS/FYDP and the Air Force F&FP systems. Some modifications to these systems will be required to obtain data at the proper levels of detail and in some of the logistic categories.

-- Obtain manpower information based on centrally administered Service military and civilian manpower data systems. Some modifications and extensions of existing systems will be required to secure the necessary information.

Construction and Housing

To obtain these data:

-- Use standard PPBS and budget documents.

The remaining six chapters of Volume I consider aspects of two broad topics: questions common to all four Service LRAs, and questions related to the DoD LRA as a whole rather than to the individual Service LRAs.

a. Questions Common to the Service LRAs

Common to all four Service LRAs are questions concerning characteristics of LRA data and the concepts of financial and manpower data to be used. Questions arise concerning LRA data characteristics because LRA data are essentially FYDP data identified to logistics line items below the FYDP level of detail. This means that both FYDP and LRA data share some characteristics; other characteristics peculiar to LRA data devolve from the process of identifying aggregate FYDP data to lower levels of logistic detail.

In our discussion of financial data concepts, we note that logistics support is financed almost entirely from investment and operating appropriations. No R&D project resources are shown in the LRA.

Our discussion of manpower data concepts identifies three fundamental questions that must be addressed if data are to be comparable among the Services. First, what is to be decided in each Service regarding whether to identify personnel through use of job code classifications, which identify manpower according to skills and training, or use of functional classifications, which identify manpower according to logistic work performed? Second, how are jobs or functions to be related to the Service organizations and activities to which the manpower are assigned? Third, how are the levels of logistic activity such as organizational, intermediate, and depot to be related to functions and organizations?

b. Questions Related to the DoD LRA as a Whole

The questions related to the LRA as a whole concern the OSD-directed Visibility and Managment of Support Costs (VAMOSC) program, GRC's Army LRA research, and an OSD-level LRA data system. The VAMOSC systems currently implemented in the Navy (ships and aircraft) and Air Force are not substitutes for the proposed DoD LRA. Five basic differences between VAMOSC and the LRA make the current forms of VAMOSC inadequate to meet the data requirements of the LRA. These are differences with respect to logistic resources included, fiscal years included, resources identified to weapon systems, reconciliation to FYDP data, and inclusion of manpower end-strengths.

The scope of IDA's Army LRA research was considerably narrower than the scope of research undertaken for the other Services, which is why the results are presented in a single chapter in Volume I rather than in a separate volume (as for each of the other Services). At the time of our study, GRC was completing a series of Army LRA-related research tasks. After reading GRC's *An Initial Feasibility Demonstration of the Army's Logistic Resource Annex (LRA) to the Five Year Defense Program,* we met with GRC personnel to discuss the applicability of their work to our guidelines for Service LRAs. We concluded that the GRC approach would produce an LRA for the Army that is very similar in terms of dollar resources and the levels of functional detail represented by the line items in Exhibit 1. However, additional work would be required if the GRC approach is to produce manpower end-strength data. In addition, the GRC Army LRA does not contain weapon system data, although some of the data on aircraft and tank weapon systems available in the data systems GRC drew upon for functional-level data are suitable for LRA use.

After conducting a data base sizing exercise and discussing the requirements for an OSD-level LRA data system with OSD and

Air Force Data Services Center personnel, we concluded that the proposed OSD LRA data base can be established and the required reports produced using existing systems, procedures, and resources. Given certain assumptions about the numbers of weapon systems for which data are required in the OSD LRA, each updating of the LRA would require a maximum of about 300,000 data elements representing 7 fiscal years.

2. Volume II: The Navy LRA

Volume II presents our analyses of how the Navy could produce the data elements required for an LRA. Chapter I discusses how the Service Appropriation Integrity approach applies to the Navy, pointing out that Navy dollars providing support to the Marine Corps are shown in the Navy LRA, but Marine Corps dollars providing support to the Navy are not shown in the Navy LRA. The first chapter also presents the version of Exhibit 1 that applies to the Navy.

Chapter II surveys the Navy data systems applicable to the LRA, with particular emphasis on the Navy Cost Information System/Five Year Defense Program and the Navy Resource Model/Force Level Analysis Interactive Language System data management systems, the primary systems used by the Navy to update the FYDP. These systems provide a framework within which to automate the Navy's LRA submission to OSD.

Manpower data systems are also discussed in Chapter II, and steps are delineated by which to develop manpower end-strength data by logistic function. The approach to the Navy shore activities embodied by the Navy Standard Implementation Documentation System/Shore Required Operational Capability System is discussed as a logical approach to use, if extended to the operating forces, to identify manpower by logistic function.

Chapter III contains a data element reference guide to the Navy LRA, which identifies the data locations, reporting

channels, and requirements for methods of calculation or estimation for each logistic function in the LRA. A line-item by line-item narrative treatment of each logistic function is contained in Appendix A, which provides the in-depth backup for the information in the data element reference guide.

3. Volume III: The Air Force LRA

Volume III presents our analyses of how the Air Force could produce the data elements required for an LRA. Chapter I notes the important features of a May 1977 Logistics Management Institute report that provided useful information on sources of logistic information in the Air Force. This chapter also contains the version of Exhibit 1 that applies to the Air Force.

Chapter II examines the Air Force Force and Financial Program data management system and the Command Manpower Data System, which together provide the bases for the LRA data required from the Air Force.

Chapter III contains a data element reference guide for the Air Force that summarizes the narrative discussion in Appendix A of each logistic function.

4. Volume IV: The Marine Corps LRA

Volume IV presents our analyses of how the Marine Corps could produce the data elements required for an LRA. Chapter I discusses how the Service Appropriation Integrity approach applies to the Marine Corps LRA: all Marine Corps TOA dollars are included, including those that provide support to the Navy, and no Navy dollars are included, even though the Navy provides substantial support to Marine Corps air activities. Chapter I also contains the version of Exhibit 1 that applies to the Marine Corps.

Chapter II discusses the data systems that the Marine Corps could use to fulfill the LRA requirements, including the Class I System that supports zero base budgeting in the operating accounts, the Material Management Programming Model used to assist in developing the depot repair program, and the Table of Manpower Requirements System used to program manpower resources. As these data systems are not equivalent to the centralized automated Navy and Air Force FYDP data management systems discussed earlier, we concluded that no single Marine Corps system can be expanded and used to automate preparation of the LRA.

Chapter III presents the Marine Corps data element reference guide. Appendix A contains the narrative line item function discussions that are summarized in the guide.

G. IMPLEMENTATION OF THE LRA

In this study we have confirmed the suitability of the basic LRA structure developed by OASD(MRA&L) and provided the framework for use of data systems by the Services to produce LRAs. Considerable workload would be required in each Service to implement the LRAs, but we believe that it is reasonable to expect the Services to produce initial LRAs under these systems to support the Service POM submittals in May 1979, assuming implementing instructions are issued early in the POM cycle. We recognize that this is not sufficient time to permit the development of completely automated systems and that refinements to Service methods will be necessary over time to satisfy all requirements.